

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-190128

(43)Date of publication of application : 21.07.1998

(51)Int.Cl.

H01S 3/18

(21)Application number : 08-350546

(71)Applicant : SONY CORP

(22)Date of filing : 27.12.1996

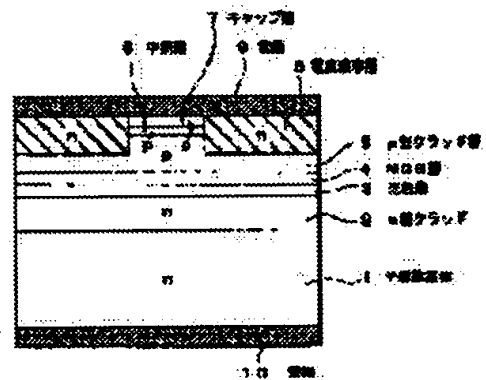
(72)Inventor : YAMAMOTO SUNAO

## (54) MANUFACTURE OF SEMICONDUCTOR LIGHT EMITTING DEVICE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a semiconductor light emitting device having an excellent temperature characteristic, a low threshold current, a low operating voltage, and high reliability and a multiple quantum barrier structure in its vertical structure by forming the films of the multiple quantum barrier structure by the atomic layer epitaxial growth method.

**SOLUTION:** After an n-type clad layer 2, an active layer 3, an MQB structure layer 4, a p-type clad layer 5, an intermediate layer 6, and a cap layer 7 are successively formed on a semiconductor substrate 1 by epitaxial growth, mesa grooves are formed by etching the laminated body from the cap layer 7 to part of the clad layer 5 on both sides by leaving parts the cap layer 7, intermediate layer 6, and clad layer 5 in a stripe-like state. Then n-type GaAs current constricting layers 8 are formed in the mesa grooves and the surface of the laminated body is flattened. The n-type clad layer 2 and MQW active layer 3 are formed by the metal organic chemical vapor growth method and the MQB structure layer 4 is formed by the atomic layer epitaxial growth method.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]